



# South Jordan City, Utah

---

Culinary Water Impact Fee Update

FINAL REPORT

December 5, 2006

Prepared by

Shaun Pigott Associates, LLC  
Donovan Enterprises



# South Jordan City, Utah Culinary Water Impact Fee Study – 2006 Update

## Table of Contents

Background .....	2
Impact Fee Legal Authorization .....	3
Existing and Future Water Demand .....	3
Reimbursement Fee Methodology .....	4
Improvement Fee Methodology .....	5
Summary and Recommendation for the Updated Culinary Water Impact Fee .....	9
Proposed Schedule of Culinary Water Impact Fees .....	9
Statutory Test of Proportionality .....	9
Indexing.....	10

## Table of Tables

Table 1 – Recommended Schedule of Culinary Water Impact Fees .....	2
Table 2 – Forecasted Growth in Equivalent Residential Units .....	4
Table 3 – Reimbursement Fee Calculations .....	5
Table 4 – Allocation of Recommended Capital Improvement Project Costs to Funding Sources .....	7
Table 5 – Financing Costs for Impact Fee-Eligible Capital Improvements .....	8
Table 6 – Improvement Fee Calculations .....	8
Table 7 – Proposed and Existing Schedule of Culinary Water Impact Fees .....	9



## Culinary Water Impact Fee Update

### Background

This update of South Jordan City's culinary water impact fee was done in close coordination with City staff and South Jordan's consulting civil engineers. The update was developed in conjunction with the capital facilities identified in the July, 2006 *Culinary Water System Capital Improvement Plan* (July, 2006 Plan). The City currently charges a culinary water impact fee of \$2,651 per Equivalent Residential Unit (ERU). The impact fee update concludes that this fee can be defensibly increased to \$3,194 per ERU.

This calculated fee is based on ERUs to match the analysis carried out in the Culinary Water Master Plan process. An ERU is defined as the potential water flow through the average residential water meter in South Jordan, which is a ¾" meter. The standard used to convert this residential equivalent flow to other meter sizes in the City is the "safe maximum operating capacity" for various meter sizes, based on the American Water Works Association standard (ANSI/AWWA - C700-02), in gallons per minute. This is an accurate and generally accepted form of calculating water impact fees and is premised on basing the fee on the "capacity to serve," which in water is most directly related to meter size and ERUs.

It should be highlighted that the recommended fee is based both on a proportionate buy-in to existing culinary water system capacity and on the cost of future planned facilities for the system identified in the Master Plan. Each portion of the fee is included in Table 1. In analyzing proposed future facilities, each project in the City's capital improvement plan was evaluated to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. For example, a facility that improves system performance to better serve only current customers would NOT be included in the impact fee. Only capacity increasing facilities and costs are included in the impact fee calculation. The improvement fee is calculated as a function of the estimated number of additional ERUs to be served by the City's culinary water facilities over the planning period. For planning purposes, build-out is assumed to occur by the end of fiscal 2025.

Table 1 – Recommended Schedule of Culinary Water Development Impact Fees

Schedule of Proposed and Existing Water Facilities Impact Fees Based on American Water Works Association Flow Factor Standards for Safe Maximum Operating Capacity					
Meter Size	Flow Factor (gal/min)	Equivalent Residential Units	Calculated Reimbursement Fee	Calculated Improvement Fee	Total Impact Fee Recommended
¾ inch	30	1.00	271	2,924	3,194
1 inch	50	1.67	451	4,873	5,324
1 x ¼ inch	75	2.50	676	7,309	7,985
1 x ½ inch	100	3.33	902	9,746	10,647
1 x ¾ inch	130	4.33	1,172	12,669	13,841
2 inch	160	5.33	1,443	15,593	17,036
2 x ½ inch	255	8.50	2,299	24,851	27,150
3 inch	350	11.67	3,156	34,109	37,265
4 inch	600	20.00	5,410	58,473	63,883
6 inch	1,250	41.67	11,271	121,819	133,090

---

The City's current impact fee methodology was adopted by the City Council on October 7, 2003. From time to time, the Council updates the impact fee schedule via resolution. The current schedule of culinary water impact fees was approved by the Council and became effective on May 1, 2005. For this update, the City has stated a number of objectives:

- Continue the existing impact fee calculation but update the actual fee based on a detailed – by project – review of the 2006 culinary water system capital improvement plan;
- Consider possible revisions to the structure or basis of the fee that might improve equity or proportionality to demand; and
- Provide clear, orderly documentation of the assumptions, methodology and results, so that City staff can respond to questions or concerns from the public.

### **Impact Fee Legal Authorization**

Impact Fees are authorized by Utah Revised Code Title 11, Chapter 36. The Code is specific in its definition of fees, their application, and their accounting. In general, an impact fee is a one-time fee imposed on new development or expansion of existing development, and assessed at the time of development approval or increased usage of the system. Overall, the Code is intended to promote equity between new and existing customers by recovering a proportionate share of the cost of existing and planned/future capital facilities that serve the developing property.


The Code further provides a framework for the development and imposition of the fees and establishes that fee receipts may only be used for capital improvements and/or related debt service. The methodology used to determine the fee must consider the cost of projected capital improvements needed to increase system capacity or level of performance. In other words, the cost of planned projects that correct existing deficiencies or do not otherwise increase capacity would not be impact fee-eligible. The impact fee must also provide a credit for construction of improvements that exceed the City's standards and reduce the City's costs in providing culinary water facilities.

### **Existing and Future Water Demand**

Existing culinary water service demand was derived from the July, 2006 Plan. Based on this data, it is estimated that as of fiscal 2005, the City served a total of 11,918 ERUs. After establishing existing demand conditions, the next step was to forecast future demand based on the criteria established in Master Plan. Based on the data contained in the July, 2006 Plan, ERUs are projected to grow at a differential rate over the forecast horizon (i.e., out to fiscal 2025). This was the growth projection approved by the City in consultation with the City's engineers.

Itemized in Table 2 are the calculations that have been used to arrive at the ERUs that will need to be served by the City to the buildout condition (assumed to be 2025):

Table 2 – Forecasted Growth in Equivalent Residential Units

South Jordan City, Utah Culinary Water Development Impact Fee Study - 2006 Update Forecasted Growth in Equivalent Residential Units <sup>1</sup> 				
Year	Forecasted Growth Rate	Equivalent Residential Units <sup>2</sup>		
		Beginning of Year	Additions	End of Year
2005				11,918
2006	8.58%	11,918	1,023	12,941
2007	8.44%	12,941	1,092	14,033
2008	7.78%	14,033	1,092	15,125
2009	7.21%	15,125	1,091	16,216
2010	5.00%	16,216	811	17,027
2011	4.00%	17,027	681	17,708
2012	4.00%	17,708	708	18,416
2013	4.00%	18,416	737	19,153
2014	4.00%	19,153	766	19,919
2015	4.00%	19,919	797	20,716
2016	3.00%	20,716	621	21,337
2017	3.00%	21,337	640	21,977
2018	3.00%	21,977	660	22,637
2019	3.00%	22,637	679	23,316
2020	3.00%	23,316	699	24,015
2021	0.61%	24,015	146	24,161
2022	0.61%	24,161	147	24,307
2023	0.61%	24,307	147	24,455
2024	0.61%	24,455	148	24,603
2025	0.61%	24,603	149	24,752
			12,834	


<sup>1</sup> Source - Culinary Water System Capital Improvements Plan Draft Report; Hansen, Allen & Luce, Inc.; July, 2006

<sup>2</sup> Not Including ERUs from the Daybreak Development

## Reimbursement Fee Methodology

As discussed, the impact fee represents a proportionate share of the cost to buy-in to existing culinary water system capacity and to expand the system to accommodate growth. The buy-in to existing capacity is designed as a reimbursement to existing ratepayers for their historical investment in the City's culinary water system. Accordingly, the City's fixed asset schedule for the culinary water system is the basis for this valuation. The allocation of this proportionate buy-in is based on the forecast of total system users as measured in ERUs. This total capacity figure is then divided into the asset base to determine a proportionate reimbursement element of the impact fee. Table 3 contains the data used to derive the proposed reimbursement element of the fee.

Table 3 – Reimbursement Fee Calculations

<p style="text-align: center;">South Jordan City, Utah  Culinary Water Development Impact Fee Study - 2006 Update  Reimbursement Fee Calculations  Financial Data as of Fiscal Year Ended June 30, 2005</p> 	
Utility Plant-in-Service (original cost): <sup>1</sup>	
Vehicles, Materials & Equipment	\$ 1,323,458
Buildings	1,260,345
System Improvements	21,744,989
Land	2,095,303
Water Shares	-
Construction Work-in-Progress	10,893,931
Total Utility Plant-in-Service	37,318,027
less:	
Accumulated depreciation <sup>1</sup>	5,902,372
Principal outstanding on bonds, notes, and loans payable <sup>2</sup>	
Water Revenue Bonds Series 2000	2,970,000
Water Revenue Bonds Series 2003	21,750,000
Developer Contributions	-
Grants, net of amortization	-
Net Basis in Utility Plant In Service Available to Serve Future Customers	6,695,654
Estimated existing and future Equivalent Residential Units (ERUs) <sup>3</sup>	24,752
Calculated Reimbursement Fee - \$/ERU	\$ 270.51

<sup>1</sup> Source: South Jordan City records

<sup>2</sup> Source: South Jordan City; Comprehensive Annual Financial Report; Fiscal Year Ended June 30, 2005

<sup>3</sup> Source: Culinary Water System Capital Improvements Plan Draft Report; Hansen, Allen & Luce, Inc.; July, 2006

## Improvement Fee Methodology

The future facility charge is based on the July, 2006 Plan established by the City (via the master plan) and specifically on costs allocable to growth. Utah Code requires that the capital improvements used as a basis for the charge be part of a capital improvement schedule, whether as part of a system plan or independently developed, and that the improvements included for fee eligibility expand capacity or level of service. The improvement fee is intended to protect existing customers from the cost burden and impact of expanding a system that is already adequate for their own needs in the absence of growth.

The key step in determining the improvement fee is identifying capital improvement projects that expand the system and the share of those projects attributable to growth. Some projects may be entirely attributable to growth, such as a distribution line that exclusively serves a newly developing area. Other projects, however, are of mixed purpose, in that they may expand

capacity but also improve service or correct a deficiency for existing customers. An example might be a pump station that both expands distribution capacity and corrects a chronic flow capacity issue for existing users.

The fee is based on the proportional approach toward capacity and cost allocation in that only those facilities (or portions of facilities) that either expand the culinary water system's capacity to accommodate growth have been included in the cost basis of the fee. The City and its consulting engineers were asked to review its planned capital improvement list in order to assess improvement fee eligibility. The following criteria were developed to guide this evaluation process:

<b>STEPS TOWARD EVALUATING CAPITAL IMPROVEMENT LISTS FOR CULINARY WATER IMPACT FEE ELIGIBILITY</b>	
1.	Capital improvements mean the facilities or assets used for culinary water supply, storage, pumping, and distribution. This definition DOES NOT ALLOW costs for operation or routine maintenance of the improvements.
2.	The development impact fee improvement base shall consider the cost of projected capital improvements needed to increase the capacity of the system to which the fee is related.
3.	An increase in system capacity is established if a capital improvement increases the "level of performance or service" provided by existing facilities or provides new facilities.
4.	The costs to finance qualified, impact fee-eligible costs can be included in the improvement fee calculation.
5.	Repair costs are not to be included.
6.	Replacement costs will not be included unless the replacement includes an upsizing of system capacity and/or the level of performance of the facility is increased.
7.	New regulatory compliance facility requirements fall under the level of performance definition and should be proportionately included.
8.	Costs will not be included which bring deficient system(s) up to established design levels.


In the development of the culinary water master plan, the City's consulting engineers identified three categories of water improvements:

1. Recommended water distribution, supply, and storage projects that would be required to correct existing system deficiencies, and;
2. Recommended water distribution, supply, and storage projects that would be required to correct fire flow deficiencies, and;
3. Recommended water distribution, supply, and storage projects that would be required to support future growth.

In developing the improvement fee, the project team evaluated each of the CIP projects within these three facility categories in order to exclude costs related to correcting existing system deficiencies or upgrading for historical lack of capacity. Only capacity-increasing costs were

used as the basis for the fee calculation, as reflected in the July, 2006 Plan. Table 4 provides the proposed fee-eligible cost figures:

Table 4 – Allocation of Recommended Capital Improvement Project Costs to Funding Sources

South Jordan City, Utah Culinary Water Development Impact Fee Study - 2006 Update Allocation of Recommended Water Distribution, Supply, and Storage Projects to Projected Funding Sources <sup>1</sup>					
					
		Anticipated Construction Date (Fiscal Year)	Project Costs		
Project No.	Project Description		Cost Attributed to Existing Demands	Costs Attributed to Future Demands	Total Costs
<i>Existing Distribution System Deficiency Projects:</i>					
1	Install 9,200 feet of 30" pipe from tank 2 - pressure zone 2	2008	1,840,900	838,700	2,679,600
2	Install 3,700 feet of 20" pipe - pressure zone 2	2008	555,000	252,800	807,800
3	Install 1,600 feet of 16" pipe - pressure zone 2	2008	200,100	91,100	291,200
4	Install 7,500 feet of 12" pipe - pressure zone 2	2008	966,000	-	966,000
5	Construct 7.5 mg storage for pressure zone 2	2008	4,645,500	1,994,100	6,639,600
5a	SCADA for tank 2	2008	16,792	7,208	24,000
5b	Permanent and temporary easement costs for pressure zone 2 tankage and pipeline	2008	237,610	101,995	339,605
6	Install 2,130 feet of 14" pipe and PRV - pressure zone 2	2008	411,600	-	411,600
7	Install 970 feet of 8" pipe along 10000 S, and 1,450 feet of 10" pipe along 300W	2008	-	277,200	277,200
8	New JVVCD connection including PRV and FCV combination	2007	56,700	80,500	137,200
9	Construct 5.0 mg of storage or pressure zones 4 and 5 (tank 5A)	2007	1,059,100	1,764,300	2,823,400
10	Construct 5.0 mg of storage for pressure zones 4 and 5 (tank 5B)	2007	1,059,000	1,764,400	2,823,400
11	New JVVCD connection tank 5A including PRV and FCV combination	2007	75,600	113,400	189,000
12	New JVVCD connection tank 5B including PRV and FCV combination	2007	36,700	55,200	91,900
13	Install 200 feet of 20" from new JVVCD connection tank 5A to tank 5B	2007	-	-	-
14	Install 2,100 feet of 20" pipe from new JVVCD connection tank 5A to tank 5A	2007	122,800	185,000	307,800
15	Install 4,500 feet of 30" pipe from tank 5A to approximately 5700 W and 10200 S	2007	350,300	527,600	877,900
16	Install 1,200 feet of 18" pipe in 10200 S, parallel to the existing 24" line	2007	64,300	96,900	161,200
17	Install 8,300 feet of 30" pipe in 11800 S from tank 5B to approximately 5500 W	2007	646,000	973,000	1,619,000
18	Install 6,400 feet of 24" pipe in 11800 S, parallel to the existing 16" line	2007	435,700	656,300	1,092,000
19	Install 4,000 feet of 20" pipe in 11800 S, parallel to the existing 10" line	2007	348,600	525,000	873,600
20	Install 6,500 feet of 16: pipe in 4000 W to serve the Kunkler property development	2007	319,500	982,500	1,302,000
21	Install three 16" connections between the proposed 24" and existing 16" lines	2007	9,000	13,500	22,500
22	Replace 12" pipe along 4800 W and 2,160 feet of 16" pipe at 10200 S	2007	432,600	-	432,600
23	Install PRV 102nd 43 8" and PRV 102nd 43 12"	2007	21,200	32,000	53,200
24	Replace 2,300 feet of 6" pipe with 12" pipe along 1000 W	2007	132,100	164,700	296,800
<i>Fire Flow Deficiency Projects:</i>					
25	Install 200 feet of 8" pipe on 1055 W connecting the 6" line at 11000 S	2008	21,000	-	21,000
26	Replace 2,000 feet of 6" pipe with 8" pipe in 9640 S	2008	215,600	-	215,600
27	Replace 800 feet of 6" pipe with 8" pipe in Congressional Way	2008	86,800	-	86,800
28	Replace 1,400 feet of 6" pipe with 8" pipe in 2950 W	2008	151,200	-	151,200
29	Replace 1,460 feet of 4" pipe with 8" pipe in 2865 W	2008	156,800	-	156,800
30	Replace 1,370 feet of 6" pipe with 8" pipe in 2950 W	2008	147,000	-	147,000
31	Replace 2,500 feet of 6" pipe with 8" pipe in 10950 S	2008	270,200	-	270,200
31a	Welby Elementary Fire Flow Deficiency Correction	2008	65,000	-	65,000
<i>Build-Out Recommended Projects</i>					
32	Retrofit PRVs at JVVCD connections in pressure zones 1, 2, & 3 w/ combo PRV/FCV	2010	90,700	77,300	168,000
32a	SCADA for JVVCD delivery points	2008	103,657	88,343	192,000
33	Install 4,100 feet of 14" pipe along 10200 S	2010	282,200	389,800	672,000
34	Construct 4.0 mg tank 1B at 2900 W - pressure zone 1	2010	1,605,200	2,468,800	4,074,000
34a	SCADA for tank 1B	2010	9,456	14,544	24,000
35	Construct 2.0 mg tank 3B at 4450 W - pressure zone 3	2010	-	2,394,000	2,394,000
36	Install 10,700 feet of 30" pipe from tank 1B south to 10400 S	2007	1,308,900	1,807,500	3,116,400
37	Install 5,300 feet of 24" pipe at 2200 W	2007	567,400	783,600	1,351,000
38	Install 1,100 feet of 24" pipe from tank 3B to the northeast	2007	-	280,000	280,000
39	Replace 8,000 feet of 10" pipe with 16" pipe along 3600 W	2007	601,300	854,700	1,456,000
40	replace 800 feet of 6" pipe with 12" pipe along 3200 W	2012	58,600	45,000	103,600
41	Connect proposed 16" pipe to existing 12" pipe just east of PRV 102nd 36	2007	11,600	16,400	28,000
42	Replace 4,100 feet of 12" pipe with 20" pipe along 4000 W; install 2,500 feet of 20" pipe along 4000 W	2010	575,400	866,600	1,442,000
A	Construct 0.4 MG of storage for pressure zone 6	2010	241,600	94,400	336,000
B	Install 20" diameter pipe that will supply tank 5B	2010	435,900	656,700	1,092,600
C	Municipal services building - culinary water allocation	2008	962,993	1,037,007	2,000,000
D	SCADA for PRVs	2010	80,891	87,109	168,000
Totals			\$22,092,100	\$23,459,206	\$45,551,305


<sup>1</sup> - Source: Culinary Water System Capital Improvements Plan Draft Report, Tables 1, 2, and 4; July, 2006; Hansen, Allen, & Luce, Inc.

Financing costs have been included in the impact fee calculation. It is assumed that impact fee-eligible construction costs will be funded from the proceeds of 20 year serial revenue bonds. For forecast purposes, these bonds are assumed to carry a coupon rate of 4.55%, with issuance costs of 1.5% of the face amount of the bonds. Furthermore, it has been assumed that the City will




upsize the bonds to fund the reserve requirement (i.e., maximum annual debt service). The total financing costs for the program are shown in Table 5:

Table 5 – Financing Costs for Impact Fee-Eligible Capital Improvements

South Jordan City, Utah Culinary Water Development Impact Fee Study - 2006 Update Calculation of Financing Costs for Impact Fee Eligible Culinary Water System Capital Improvements 							
Assumptions:							
Interest rate		4.55%					
Issuance cost		1.50%					
Term		20					
	2007	2008	2009	2010	2011	2012	Program Total
Impact Fee Eligible Costs to be Bonded:							
Existing Distribution System Deficiency Projects:	7,934,300	3,563,103	-	-	-	-	11,497,403
Fire Flow Deficiency Projects:	-	-	-	-	-	-	-
Build-Out Recommended Projects	3,742,200	1,125,350	-	7,049,252	-	45,000	11,961,802
Total Project Costs per Bond Sale	\$ 11,676,500	\$ 4,688,453	\$ -	\$ 7,049,252	\$ -	\$ 45,000	\$ 23,459,206
Bond Sizing:							
Amount Borrowed	12,862,550	5,164,687	-	7,765,286	-	49,571	25,842,094
Issuance Costs	192,938	77,470	-	116,479	-	744	387,631
Reserve Funding	993,112	398,763	-	599,554	-	3,827	1,995,257
Net Proceeds from Revenue Bond Sale	\$ 11,676,500	\$ 4,688,453	\$ -	\$ 7,049,252	\$ -	\$ 45,000	\$ 23,459,206
Annual Debt Service	993,112	398,763	-	599,554	-	3,827	
Interest Expense Over the Life of the Indenture:							
1	585,246	234,993	-	353,321	-	2,255	1,175,815
2	566,688	227,542	-	342,117	-	2,184	1,138,531
3	547,286	219,751	-	330,403	-	2,109	1,099,550
4	527,001	211,606	-	318,157	-	2,031	1,058,795
5	505,793	203,090	-	305,354	-	1,949	1,016,186
6	483,620	194,187	-	291,967	-	1,864	971,638
7	460,438	184,879	-	277,972	-	1,774	925,064
8	436,201	175,147	-	263,340	-	1,681	876,370
9	410,862	164,973	-	248,042	-	1,583	825,460
10	384,369	154,335	-	232,049	-	1,481	772,235
11	356,671	143,214	-	215,327	-	1,375	716,587
12	327,713	131,586	-	197,845	-	1,263	658,408
13	297,438	119,430	-	179,567	-	1,146	597,581
14	265,785	106,720	-	160,458	-	1,024	533,987
15	232,691	93,432	-	140,479	-	897	467,499
16	198,092	79,540	-	119,591	-	763	397,986
17	161,919	65,015	-	97,752	-	624	325,310
18	124,099	49,829	-	74,920	-	478	249,327
19	84,559	33,953	-	51,049	-	326	169,888
20	43,220	17,354	-	26,093	-	167	86,833
	\$ 6,999,690	\$ 2,810,579	\$ -	\$ 4,225,803	\$ -	\$ 26,976	\$ 14,063,048

In terms of the allocated share of future facility costs identified in the Plan and proportionately recoverable through the improvement fee, Table 6 summarizes the calculations:

Table 6 – Improvement Fee Calculations

South Jordan City, Utah Culinary Water Development Impact Fee Study - 2006 Update Improvement Fee Calculations 		
	Total Project Cost	Impact Fee Eligible Costs
Future Projects Cost Category:		
Existing Distribution System Projects:	25,540,105	11,497,403
Fire Flow Deficiency Projects:	1,048,600	-
Build-Out Recommended Projects	18,897,600	11,961,802
Total	45,486,305	23,459,206
Total Impact Fee Eligible Costs of Existing and Future System Improvements.....		\$ 23,459,206
add: Bond Issuance Costs and Interest Expense		14,063,048
Total Future Project Costs to Support Growth and Financing Costs.....		37,522,253
Total Growth in Equivalent Residential Units (ERU) (to Build-out).....		12,834
Calculated Water System Development Impact Fee per ERU.....		\$ 2,923.66

## Summary and Recommendation for the Updated Culinary Water Impact Fee

### Proposed Schedule of Culinary Water Impact Fees

The total proposed impact fee schedule (reimbursement and improvement) by meter size is shown in the following table:

Table 7 – Proposed and Existing Schedule of Culinary Water Development Impact Fees

Schedule of Proposed and Existing Water Facilities Impact Fees Based on American Water Works Association Flow Factor Standards for Safe Maximum Operating Capacity					
Meter Size	Flow Factor (gal/min)	Equivalent Residential Units	Calculated Reimbursement Fee	Calculated Improvement Fee	Total Impact Fee Recommended
¾ inch	30	1.00	271	2,924	3,194
1 inch	50	1.67	451	4,873	5,324
1 x ¼ inch	75	2.50	676	7,309	7,985
1 x ½ inch	100	3.33	902	9,746	10,647
1 x ¾ inch	130	4.33	1,172	12,669	13,841
2 inch	160	5.33	1,443	15,593	17,036
2 x ½ inch	255	8.50	2,299	24,851	27,150
3 inch	350	11.67	3,156	34,109	37,265
4 inch	600	20.00	5,410	58,473	63,883
6 inch	1,250	41.67	11,271	121,819	133,090

Source: American Water Works Association; AWWA Standards for Cold-Water Meters – Displacement Type, Bronze Main Case; ANSI/AWWA C700-02; Effective date: January 1, 2003. [www.awwa.org](http://www.awwa.org)

### Statutory Test of Proportionality

The proposed schedule of culinary water impact fees shown above for South Jordan City are proportionate and reasonably related to the capital facility service demands of new development. The written analysis of the impact fee methodology and the cash flow analysis have established that impact fees are necessary to achieve an equitable allocation of these costs between existing and future water utility customers. Our analysis has tested for the seven evaluation factors set forth in the Utah Supreme Court decision *Banberry Development Corp. v. South Jordan City*. The analysis of these seven factors is discussed below.

1. The proposed schedule of impact fees are based on the cost of existing public facilities and on the projected cost of future public facilities. These future public facilities were derived from a Capital Facilities Plan that was prepared using local cost factors and construction practices typical to South Jordan City.
2. The impact fee analysis has identified the manner of financing existing public facilities, which includes user charges, bonds, general taxes, grants, contributed capital, and intergovernmental transfers. These revenue sources are summarized in the cash flow analysis found in table 3 of this report.
3. South Jordan City will evaluate the extent to which newly developed properties are entitled to a credit for common facilities that have been provided by owners or developers as

---

compared to common facilities provided by the City in other parts of the City. These “site-specific” credits will be available for system improvements identified in the Capital Facilities Plan, as summarized in this report. Administrative procedures for site-specific credits will be addressed in the City’s impact fee ordinance.

4. Citywide service areas are appropriate for the types of public facilities included in the impact fees study. Therefore, separate geographic zones for the collection and expenditure of impact fees are not necessary in South Jordan. Extraordinary costs, if any, in servicing the newly developed properties will be addressed through administrative procedures that allow independent studies to be submitted to the City. These procedures will be addressed in the impact fee ordinance.
5. The time-price differential inherent in fair comparisons of amounts paid at different times has been addressed in the evaluation of credits for each type of impact fee. All costs in the impact fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the annual evaluation and update of impact fees.

## **Indexing**

With respect to future adjustments to culinary water impact fees, it is recommended that the City adopt a policy of indexing. Indexing allows the City to account for inflationary cost impacts in a defensible and replicable manner. Under this approach, City staff will report to the City Council annually regarding the cost escalation of capital projects. These escalation calculations should be based on generally accepted indices such as the Construction Cost Index (published by American City & County magazine) or the Engineering News Record’s Construction Cost Index (ENR). This approach allows the City to “keep up with inflation”, but does not preclude the City from revising the impact fee methodology or calculations if future situations warrant such a review.